Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-20
	No:	Claims	
Inventive step (IS)	Yes:	Claims	3
	No:	Claims	1,2,4-20
Industrial applicability (IA)	Yes:	Claims	1-20
	No:	Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

Reference is made to the following documents:

D1: PATENT ABSTRACTS OF JAPAN vol. 012, no. 061 (M-671), 24 February 1988 (1988-02-24) & JP 62 207590 A (ASAHI DAIYAMONDO KOGYO KK; others: 01), 11 September 1987 (1987-09-11)

D2: PATENT ABSTRACTS OF JAPAN vol. 011, no. 302 (M-629), 2 October 1987 (1987-10-02) & JP 62 094211 A (SUMITOMO ELECTRIC IND LTD), 30 April 1987 (1987-04-30)

D3: US-A-3 437 785 (DAVID SCIAKY) 8 April 1969 (1969-04-08)

Re Item I
Basis of the report

1. Amendments (Article 34(2) PCT)
The amendments do not seem to introduce subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT.

Re Item V
Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2. Novelty (Article 33(2) PCT)
It seems the applicant assumes that the polycrystalline diamond element of document D1 is not phase-pure. Although PCD usually indeed does not consist purely out of diamond, but also contains a binder phase, it can not just be assumed that this is also the case with the PCD from document D1. There is also phase-pure PCD, like polycrystalline CVD diamond. Document D1 does not disclose, however, at least not in the abstract, any of the diamond forms mentioned in claim 1 of the application. Therefore the application seems novel in comparison with the cited prior art.

3. Inventivity (Article 33(3) PCT)
The applicant has made clear that it is essential to the invention that the metal used is a carbide-former. Since independent claims 1, 12 and 13 do not contain this feature, they do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

It is acknowledged that not all metals easily form a carbide, although technically even a metal like nickel can from a carbide. This will normally not happen though. The cited prior art does not suggest the joining of a carbide forming metal with phase-pure diamond elements through electron beam heating. Claim 3 therefore is inventive.

Claims 1, 2 and 4-20 are not connected with an inventive step, since they lack the aforementioned essential feature.

Re Item VIII

Certain observations on the international application

4. Clarity and support (Article 6 PCT)

Although claims 1, 12 and 13 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.